

**REMARKS**

This Amendment, submitted in response to the non-final Office Action dated July 1, 2005, is believed to be fully responsive to the points of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-38 are pending. Claim 1, 2, 12, 17, 26, 28, 35 and 36-38 have been amended.

The Examiner has objected to the use of the term "about" in Claim 12. Claim 12 has been amended to remove "about." Withdrawal of the rejection of Claim 12 under 35 USC 112, second paragraph, is respectfully requested.

Claims 1-38 have been rejected under 35 USC 102(b) over U.S. Patent No. 4,500,977. Applicants respectfully submit the following remarks in support of the patentability of the pending claims.

**1. Claims 1-34:**

Claim 1 has been amended to clarify that the modulated timing pulse signal comprises a timing pulse signal modulated using an uplink carrier signal and that the modulated echo signal is modulated using a downlink carrier signal. No new matter has been added by the amendment, and support for the amendment can be found, for example, on page 5, line 27- page 6, line 12 and page 9, line 27 – page 10, line 3 of the present application.

Claim 1 is directed to a wireless transceiver for performing ultrasonic measurements. The wireless transceiver includes an uplink transmitter configured to transmit at least one modulated timing pulse signal, each modulated timing pulse signal being transmitted over a respective uplink wireless channel. The modulated timing pulse signal comprises a timing pulse signal modulated using a carrier signal. The wireless transceiver further includes at least one uplink receiver, each uplink receiver being adapted to receive a respective one of the modulated timing pulse signals from the uplink transmitter and being configured to supply an unmodulated timing pulse signal to a respective transducer. The wireless transceiver further includes at least one downlink transmitter, each downlink transmitter being adapted to receive an echo signal from the respective transducer, and being configured to extract envelope information from the echo signal and to transmit a modulated echo signal over a respective downlink wireless channel. The modulated echo signal is modulated using a downlink carrier signal. The wireless transceiver further

includes a downlink receiver adapted to receive the modulated echo signals, each modulated echo signal being received from the respective downlink transmitter.

In contrast, Gelhard is directed to an ultrasonic transducer 4, which is directly connected to a US generator 5 (Col. 11, lines 3-30, FIGS 2 and 3). As indicated in FIGS. 2 and 3, the transducer 4 is directly connected to US generator 5, and Gelhard does not teach or suggest the use of wireless transceiver of Claim 1 nor of any of its recitations, as discussed in detail below. Rather, the transducer 4 of Gelhard appears to have been confused with the claimed wireless transceiver.

Turning to the individual recitations of Claim 1, Gelhard does not teach or suggest an uplink transmitter configured to transmit at least one modulated timing pulse signal, each modulated timing pulse signal being transmitted over a respective uplink wireless channel, where the modulated timing pulse signal comprises a timing pulse signal modulated using a carrier signal, as recited by Claim 1. Rather, the Examiner cites the transducer 4 to supply this recitation of Claim 1. However, the transducer 4 of Gelhard transmits an ultrasonic pulse signal to a distant object. An ultrasonic pulse signal is not a timing pulse signal, let alone a modulated timing pulse signal comprising a timing pulse signal modulated using a carrier signal, as recited by Claim 1.

In addition, Gelhard does not teach or suggest at least one uplink receiver, each uplink receiver being adapted to receive a respective one of the modulated timing pulse signals from the uplink transmitter and being configured to supply an unmodulated timing pulse signal to a respective transducer, as recited by Claim 1. Here, the Examiner cites the distant object. However, the distant object is neither adapted to receive a modulated timing pulse signal comprising a timing pulse signal modulated using a carrier signal nor configured to supply an unmodulated timing pulse signal to a respective transducer. Rather, the ultrasonic pulse signal from the transducer 4 is reflected from the distant object as an echo signal. As noted above, the ultrasonic pulse signal emitted by the transducer is not a modulated timing pulse signal comprising a timing pulse signal modulated using a carrier signal. Similarly, the echo signal is not a timing pulse signal.

Gelhard does not teach or suggest at least one downlink transmitter, each downlink transmitter being adapted to receive an echo signal from the respective transducer, and being configured to extract envelope information from the echo signal and to transmit a modulated echo signal over a respective downlink wireless channel, the modulated echo signal being modulated using a downlink carrier signal, as recited by Claim 1. For example, Gelhard does not teach or suggest a downlink transmitter configured to transmit a modulated echo signal over a respective downlink wireless channel, the modulated echo signal being modulated using a downlink carrier signal, as

recited by Claim 1. On the contrary, as shown for example in FIGS. 2 and 3 of Gelhard, the transducer 4 is directly connected to the processing circuitry of Gelhard and does not transmit modulated echo signals over wireless channels.

For at least these reasons, Applicants respectfully submit that Claim 1 is patentably distinguishable over the cited art.

Turning to the dependent claims, Claim 2 has been amended for clarification, and support for the amendment can be found, for example, on page 5, line 27- page 6, line 12 of the present application. Claim 17 has been amended for clarification, and support for the amendment can be found, for example, on page 9, line 27 – page 10, line 3 of the present application.

As dependent Claims 2-34 depend from Claim 1, these claims are also patentably distinguishable over the cited art for at least the reasons discussed above with respect to Claim 1. Accordingly, Applicants respectfully request that the rejections of Claims 1-34 under 35 USC 102(b) be withdrawn.

## **2. Claim 35**

Claim 35 has been amended to clarify that each of the modulated timing pulse signals comprises a respective timing pulse signal modulated using an uplink carrier signal and that each of the modulated echo signals is modulated using a downlink carrier signal. No new matter has been added by the amendment, and support for the amendment can be found, for example, on page 5, line 27- page 6, line 12 and page 9, line 27 – page 10, line 3 of the present application.

Applicants respectfully submit that Claim 35 is patentably distinguishable over the cited art for reasons analogous to those discussed above with reference to Claim 1. Accordingly, Applicants respectfully request that the rejection of Claim 35 under 35 USC 102(b) be withdrawn.

## **3. Claims 36-38**

Claim 36 has been amended to clarify that the at least one modulated timing pulse signal comprises a timing pulse signal modulated using an uplink carrier signal and that the modulated echo signal is modulated using a downlink carrier signal. Claims 37 and 38 have been similarly amended. No new matter has been added by the amendments, and support for the amendments can be found, for example, on page 5, line 27- page 6, line 12 and page 9, line 27 – page 10, line 3 of the present application.

Applicants respectfully submit that Claim 36 is patentably distinguishable over the cited art for reasons analogous to those discussed above with reference to Claim 1. Further, as claims 37-38 depend from Claim 36, these claims are also patentably distinguishable over the cited art for at least these reasons. Accordingly, Applicants respectfully request that the rejections of Claims 36-38 under 35 USC 102(b) be withdrawn.

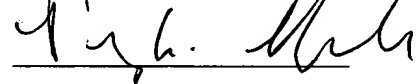
**CONCLUSION**

In view of the foregoing, Applicants respectfully submit that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

**Please charge all applicable fees associated with the submittal of this Amendment and any other fees applicable to this application to the Assignee's Deposit Account No. 07-0868.**

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



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